BY ORDER OF THE COMMANDER
4TH AIR SUPPORT OPERATIONS GROUP (USAFE)

4 ASOG INSTRUCTION 91-202

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SAFETY PROGRAM MANAGEMENT (GROUND AND WEAPONS) OPERATING INSTRUCTIONS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Waivers to Air Force Instruction (AFI) 91-202, United States Air Forces in Europe (USAFE) Supp 1, and further supplementation in accordance with paragraph 1.6.11.16 are as follows:

This operating instruction (OI) outlines the Safety Management Program for the 4th Air Support Operations Group (4ASOG), headquartered at Heidelberg, Germany. It identifies responsibilities of the Group Safety Manager and the Operating Location Safety Representatives (OLSRs), as well as outlines procedures for conducting inspections, maintaining a Safety Management Book, reporting mishaps, self-evaluation, safety education and training, and dissemination of safety-related information to 4ASOG personnel.

Introduction

This OI is not all-inclusive. It is only a supplement. In order to minimize redundancy, requirements within existing instructions and standards will be repeated here as infrequently as possible. Therefore, 4ASOG Safety Reps must be familiar with all AFIs and AFOSH standards listed in this OI as well as any other relevant documents.

This OI will follow all AF Program Safety requirements, unless the Army's Safety requirement meets the same intent (e.g., base driving training for licenses, Army Safety Days, reporting facility/base hazards, etc). Safety boards, if required by Army safety staff, will meet their guidelines, however AF items such as the AF Form 457 (Hazard Report), mishap reporting info, and unit safety policies and procedures will be included. Although the Army owns each facility hazard associated with their base, AF members will report any equipment or systems hazards owned by the AF through the appropriate AF channels using the AF Form 457. In cases where there is a conflict between Army and AF requirements, use the most stringent.

> Note: Since the Army is the host installation and some limited safety support is needed, refer to the Army-AF support agreement for guidance. 4ASOG should review support agreements annually to ensure the correct level of support is being given.

As a geographically-separated unit (GSU), 4ASOG consists of 285 people based at 11 separate operating locations, all located on different Army installations, spread across the breadth of southern Germany from west of Ramstein to nearly the Czech border. The median size of these locations is 17 people, averaging upwards of 4 additional duties assigned to each individual.

As the "Unit Safety Rep," the 4ASOG Safety Manager is the only person governed by AFI 91-202, USAFE Sup 1, para 8.5 (added). However, several Operating Location Safety Representatives (OLSRs), whose functions are solely governed by this OI, assist the Safety Manager in the execution of the 4ASOG Safety Program. Due to limited manpower within 4ASOG, it is expected the Safety Manager will be dual-hatted as an OLSR.

Due to the distance between 4ASOG and its parent unit, 3rd Air Force (3AF), some support is provided by the 86th Air Wing (86AW) at Ramstein Air Base. Additionally, each Army installation provides some degree of "host base" support through Inter-Service Support Agreements. However, the Army is generally neither familiar with nor subject to AF Instructions. Therefore, to simplify a complex set of responsibilities, except where otherwise defined, 3AF is considered the "installation safety office."

Operations tempo in 4ASOG is among the highest in USAFE. Personnel travel on a daily basis between operating locations, in some of the densest traffic in Europe, requiring upwards of 6 hours to arrive at destinations. The majority of the ASOG is maxed out on TDY days. This OI therefore attempts to lessen safety-related travel by front-loading and enhancing one-on-one training and making maximum use of technology (Web pages, email, video teleconferencing, etc).

It is expected this OI will evolve as new support structures are tested and improvements are found. More attachments to this OI will be added to simplify and standardize training requirements. Additionally, the number of safety training programs and AFIs affecting this Group has not solidified. However, as General Patton said, "Better a good plan today than an excellent plan next week." Let's get to work.

Chapter 1

SAFETY MANAGER DUTIES AND RESPONSIBILITIES

4ASOG Safety Manager

1.1. 4ASOG Safety Manager will:

1.1.1. Not need to be a rated officer. Instead, must be between E-7 and O-5, inclusive. However, any NCO rank will be acceptable.

1.1.2. Either the Safety Manager or Deputy Safety Manager will be Tactical Air Control / Mission Ready qualified. Currency is not required.

1.1.3. Receive training from 3AF consisting of a Staff Assistance Visit (SAV) to the 4th Air Support Operations Squadron (4ASOS) and one of the two other squadron mains. Facilities and program management will be covered. Prior to arrival of 3AF Ground Safety (3AF/SEG), the new Safety Manager will be familiar with references listed in this OI as well as the 86AW's Unit Safety Rep Training CD-ROM. Emphasis will be placed on AFIs 91-202 and 91-301 as well as their USAFE supplements.

1.1.4. Attend the Army's Safety Operations Course 40 (a week-long course) within 6 months of date of letter of appointment.

1.1.5. Maintain the 4ASOG Safety Management Book.

1.1.6. Provide 3AF/SEG with a mirrored version of the 4ASOG Safety Management Book.

1.1.7. Train primary Operating Location Safety Reps within 30 days of the date of the letter of appointment. Training will consist of two Staff Assistance Visits. One will be to the safety rep's location; the other will be to the next-nearest 4ASOG location to learn by comparison. Training will consist of:

1.1.7.1. Inspection techniques and documentation

1.1.7.2. AFIs and AFOSH Standards

1.1.7.3. Program management

1.1.7.4. Introduction to the installation's Safety, Health, and Environmental offices as well as the Fire Department.

1.1.8. Maintain the Safety section of the 4ASOG web page.

1.1.9. Work closely with Group ORM Advisor.

1.1.10. Attend quarterly Unit Safety Rep meetings at 86AW or receive minutes of those meetings.

1.2. Deputy Safety Manager will:

1.2.1. Be trained by the Safety Manager. Training will consist of:

1.2.1.1. Within 30 days of the date of the appointment letter -- 1) required safety-related training for location personnel, 2) training on AFIs and AFOSH Stds, 3) training on 86AW's Safety CD-ROM, 4) an on-site self-inspection, and 5) meeting Base Safety, Fire Dept, Base Environmental, and Base Health.

1.2.1.2. Within 90 days of the date of the appointment letter -- 2 more SAVs at nearby 4ASOG locations.

1.2.2. Maintain a mirrored version of the Safety Manager's Safety Management Book (unless the book is accessible online).

1.2.3. Maintain quality control over the Job Safety Training Outlines in 4ASOG.

Chapter 2

OPERATING LOCATION SAFETY REPRESENTATIVE DUTIES AND RESPONSIBILITIES

Operating Location Safety Representatives

2.1. One primary and one alternate Operating Location Safety Rep (OLSR) are required at all 4ASOG facilities. The alternate safety rep requires no training.

2.2. Primary OLSRs will attend quarterly safety meetings provided by the local Army Ground Safety Office. Maintain minutes of these meetings. If attendance is not feasible, minutes will suffice in lieu of attendance.

2.3. All primary OLSRs will:

2.3.1. Receive training from the Safety Manager as described in Chapter 1.

2.3.2. Review all references three times each year.

2.3.3. Submit copies of all Hazard Reports to the Safety Manager.

2.3.4. Assist the Operating Location Vehicle Control Officer in monitoring the safe operation of government vehicles and promoting vehicle safety programs.

2.3.5. Work closely with Operating Location ORM Advisor.

2.3.6. Brief all personnel semi-annually on the Hazard Reporting Program, its associated AF Form 457, and location of these forms.

2.3.7. Twice a year, perform and document a self-inspection of the operating location safety program (using the USAFE Functional Inspection Guide for GSU Ground Safety) and inspect operating location facilities. Send a copy of the results to the Safety Manager.

2.3.8. Assist in inspections conducted by Army base safety staff. Monitor all safety inspection discrepancies to completion of corrective action.

2.3.9. Maintain a current CD-ROM of all refs in Atch 3 plus any others that may be applicable. Purpose is to have a copy that deploys downrange in the event access to the Web or home server is limited.

2.4. Alternate OLSRs will assume all duties of the primary when the primary is deployed downrange (to include receipt of training from Safety Manager). If both primary and alternate are deployed downrange, the commander will appoint an ad hoc OLSR who will only be responsible for conducting and documenting spot inspections, reporting mishaps, and attending safety meetings.

Chapter 3

SAFETY INSPECTIONS

Operating location program assessments and facilities inspections

3.1. The USAFE Functional Inspection Guide for GSU Ground Safety is used as a guide to evaluate the 4ASOG Safety Program.

3.2. Spot Inspections: Any significant findings are reported to the Safety Manager. See Atch 1 for format.

3.2.1. Primary OLSRs:

3.2.1.2. At Mannheim, Wiesbaden, and Würzberg will perform one spot inspection per week.

3.2.1.2. At Heidelberg, Schweinfurt, Vilseck, Hohenfels, Grafenwöhr, Vicenza, Friedberg, and Baumholder will perform two spot inspections per month.

3.2.2. Alternate OLSRs will not perform spot inspections unless the primary is TDY for more than 2 weeks.

3.2.3. Neither the Group Safety Manager nor the Deputy Safety Manager will perform spot inspections at their own operating locations (intent here is to minimize redundancy since these managers are likely the Safety Reps at their own operating locations and therefore are already complying with paragraph 3.2.1.). Neither the Group Safety Manager nor the Deputy are restricted from conducting spot inspections at other operating locations.

3.3. Due to the geographical layout of the Group, the Safety Manager will usually conduct the annual self-inspection of a given operating location as part of a weeklong inspection of an entire ASOS. Within 30 days of inspection, a report will be generated containing specific findings and recommended corrective actions. This report will be forwarded to the Group Commander, the appropriate squadron commander, and the 4ASOG Chief of Self-Inspection for action as current guidelines dictate.

Chapter 4

SAFETY MANAGEMENT BOOKS

4.1. The following is the Safety Management Book Table of Contents for the Safety Manager as well as each OLSR. The Safety Management Book must be reviewed on a quarterly basis in order to maintain currency.

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Chapter 5

MISHAP REPORTING PROCEDURES

5.1. The Operating Location Safety Representative must report all mishaps, regardless of severity, to Group Safety promptly. The Group Commander must be informed immediately, day or night, in the event of any mishap resulting in the hospitalization or death of a 4ASOG member.

5.1.1. Telephonic/Fax Notification. Group Safety must be informed by telephone (475-7495/6108, fax 475-6920 or Deputy Group Safety 370-5986, fax 370-5980) as soon as the Operating Location Safety Representative has any information. Notification will not be delayed to gather all information.

5.1.1.1. For injuries: Last name, first name, middle initial of the individual involved in the mishap; rank; Air Force Specialty Code; the unit and office symbol; the type of injury and the body part injured; the number of days lost due to hospitalization or being put on quarters; how the mishap occurred, and where it occurred.

5.1.1.2. For property damage:

5.1.1.2.1. Vehicles: vehicle registration number, operator's name, was the operator properly licensed, were seat belts used.

5.1.1.2.2. Buildings: building number and type facility.

5.2. Mishap notification procedures must be well defined and publicized to all personnel to ensure timely notification. These procedures will ensure key personnel within the operating location are notified in the event of a mishap. Operating locations will notify the Group Commander immediately concerning any mishap that results in a fatality. The following are the responsibilities of all individuals involved in a mishap:

5.2.1. Personnel who are involved in or who witness a mishap: Seek medical attention if required. Notify immediate supervisor or Operating Location Safety Representative. If both of these are unavailable, notify Group Safety. Ensure that a USAFE Form 281 is completed with the supervisor or the Operating Location Safety Representative.

5.2.2. Supervisors: Ensure injured personnel receive medical care. Ensure the Operating Location Safety Representative and Group Safety are notified. Notify the appropriate base or installation agency. Submit a USAFE Form 281 to the Operating Location Safety Representative. Assist safety investigators if necessary.

5.2.3. Operating Location Safety Representative: Investigate the mishap. Call a photographer or photograph the mishap if required. Ensure a USAFE Form 281 is completed and received by Group Safety as well as 86th Airlift Wing Safety (86AW/SE) (fax 480-2144) within 5 days of the mishap. Assist safety investigators as required. Ensure corrective actions are implemented if necessary.

Chapter 6

SAFETY EDUCATION AND TRAINING PROGRAM

The various AFIs and AFOSH Standards direct the following safety-related training for various personnel within 4ASOG. This list may not be all-inclusive. Where noted, the references are supplemented.

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6.1. Supervisor Safety Training (AFI 91-301, para 7.2.).

6.1.1. SST is conducted at Ramstein AB, in the Hercules Theater, once a month. Training lasts 2 hours. POC is 86AW/SEG, ph 480-7233. This training will be documented on the AF Form 55.

6.1.2. Sending SrA and SSgts who are not supervising is optional. However, they might be thrust into a supervisor position in a moment's notice because of many reasons. A SrA during a real world deployment might have to take a supervisory position and, because of the ops tempo, there might not be time to send him/her to SST for several months.

6.2. 4ASOG Safety Days (desired twice per year). Normally handled by each operating location.

6.2.1. Summer: Issues discussed may include summer sports injuries, swimming, boating, heat exhaustion, seat belt usage, and dehydration.

6.2.2. Winter: Issues discussed may include driving conditions, hypothermia, frostbite, seat belt usage, and dehydration.

6.3. Lifting Program (AFOSH Std 91-46, chapter 1): The following references may be used to provide instruction: AFOSH Std 91-10, para 2.13.1. and AFOSH Std 91-20, figure 1.1. Training will be documented on the AF Form 55.

6.4. Lockout/Tagout Program (AFOSH STD 91-45, para 5.2.): All training on this program shall be documented on the AF Form 55.

6.4.1. Maintainers: The Job Safety Training Outline of each maintenance supervisor and equipment maintenance person shall cover type and magnitude of applicable energy sources, the methods and means necessary for energy isolation and control, and the use of the lockout and tagout procedures. Annual retraining.

6.4.2. All others: The Job Safety Training Outline of all other 4ASOG personnel will cover purpose of program and how to recognize a locked out or tagged out device.

6.5. AF Hazard Communications (HAZCOM) Program Training (AFOSH STD 161-21 (soon to be replaced by AFOSH STD 48-21)): Nearly every person in 4ASOG requires HAZCOM training due to potential exposure to hazardous chemicals in the course of duties. Exceptions will be determined by each organization's occupational health coordinator. This health coordinator is initially trained by an authorized Army organization such as Base Environmental or Base Safety (actual training organization will vary with each operating location). Note that an organization may instead choose to have supervisors receive this training. Once properly trained, the health coordinator is authorized to subsequently train the remaining personnel at the operating location. Documentation in Form 55.

6.6. Bloodborne Pathogens Training (AFOSH Std 91-50, para 2.3.1.): Required training for those who install or maintain communications systems. Also required for their safety observers. Documentation in Form 55. Ref is not further supplemented.

6.7. Confined Space Program (AFOSH Std 91-25): 4ASOG has been surveyed for confined spaces. It has been determined that there are no areas which fall into this category. However, all 4ASOG personnel are required to receive confined space awareness training. The below lines will be placed in each person's Job Safety Training Outline in order to meet the requirement for such training:

- Confined Space Awareness Training (such as tunnels, pipes, and fuel tanks)
  - Confined spaces (none exist at 4ASOG locations) are extremely dangerous
    - Insufficient oxygen
    - Risk of explosion
    - Toxic gases
    - Risk of becoming trapped
  - Many of these hazards are not readily apparent (odorless, etc)
  - Do not enter. NOBODY in 4ASOG is Confined Space Certified!

6.8. Radio Frequency Radiation (AFOSH Std 48-9, para 3.7): Numerous 4ASOG personnel routinely work directly with equipment exceeding levels in ref, table 2.1. Minimum initial training (within 30 days of assignment to work area) and annual refresher training requirements for these personnel are met with the material in Atch 2. Documentation of all training will be on AF Form 55.

6.9. Weapons Safety Training (AFI 91-202, para 10.10.): The 4ASOG weapons safety program will be certified by 86AW/SEW.

6.10. CPR (AFOSH Std 91-50, para 2.3.1): Required training for those who install or maintain communications systems. Also required for their safety observers. Documentation in Form 55. Ref is not further supplemented.

6.11. Safety Bulletin Boards: The following items are required to be posted on all 4ASOG safety boards:

6.11.1. AFVA 91-307, AFOSH Rights and Responsibilities

6.11.2. DD Form 2272, DoD Safety and Occupational Health Protection Program

6.11.3. Hazard Report Instructions and blank AF FORM 457s

6.11.4. Group and Squadron Commanders' safety policy letters

6.11.5. Seasonal safety promotional material

6.11.6. Safety information (dated and changed monthly)

6.11.7. Mishap notification instructions (Chapter 5 above)

6.11.8. Department of the Army Form 4755, Employee Report of Alleged Unsafe or Unhealthful Working Conditions (plus instructions for completing this form)

6.12. Local Conditions (AFI 91-207, para A2.2.): Documentation in Form 55. This requirement may be met if the Army provides a suitable class in its newcomers course. A copy of the training slides will be maintained.

6.13. Local Conditions Refresher Training for Personnel Age 26 and Under (AFI 91-202, USAFE Supp 1, para 6.1.2.): One-time-only course for young personnel after on station 6 months and less than 1 year. Documentation in Form 55. Ref is not further supplemented.

6.14. Motorcycle Training (AFI 91-207, para A2.4.): Documentation in Form 55. Ref is not further supplemented.

6.15. Briefings for TDY Personnel (AFI 91-202, USAFE Supp 1, para 8.6.): Ref is not further supplemented.

Atch 1

SPOT INSPECTION LOG

TIME/DATE OF INSPECTION		ACTIVITY/AREA INSPECTED	PERSON CONTACTED	INSPECTOR	DISCREPANCIES NOTED/ACTIONS TAKEN	OPEN/CLOSED (applicable)	

Atch 2

RADIO FREQUENCY (RF) RADIATION TRAINING
SAFETY DATA SHEET

This guideline is intended as a source of information for employees, employers, physicians, industrial hygienist, and other occupational health professionals who may have a need for such information. It does not attempt to present all data; rather, it presents pertinent information and data in summary form.

I. WHAT IS IT?

a. RF is a form of non-ionizing radiation. It is produced by our radio emitters on jeeps, trucks, etc., the radars and assorted avionics equipment used on our aircraft; microwave emitters use in our telecommunications systems; and microwave cooking ovens.

b. It is low energy radiation common to many areas on our bases and outlying support areas. Those of you working on the flight-line, aircraft maintenance and communication's maintenance must pay particular attention to your operational and technical order procedures describing cautionary steps that must be taken where RF emitters are operating.

II. WHAT ARE THE EFFECTS?

a. RF is an energy that can be easily absorbed and dissipated in our body tissues as heat. Over exposure can result in heat stress. Except for the eyes, the sensation of warmth provides us with a warning mechanism.

b. The eyes and the testicles are most sensitive to the RF because they have poor blood supplies; therefore, are unable to get rid of the RF produced heat as easily as other body organs. Repeated, long term over exposure can produce cataracts in your eyes. Exposure of the testes can halt sperm production; however, the effect is reversible and of short duration.

c. Pulsed RF fields are well known for producing so-called "microwave hearing" effects. The sensation produced is a clicking or buzzing sound depending on the repetition rate. There are also some indications that long-term exposure may lead to slight decreases in blood pressure, feelings of apathy and depression. The significance of validity of these effects is unknown at this time and is currently under study.

d. The effects of RF radiation on our bodies depend on its frequency, amount of time exposed, the size and shape of the person exposed, and his/her ability to get rid of the absorbed energy through normal body responses.

(1) It is Air Force policy to avoid unnecessary exposures; this is also common sense. There are times; however, when workers go into or through hazard areas. Under these conditions (such as repairing something within a transmitting array or moving past a parked aircraft which is testing its radar), the workers will suffer no effects if their exposure does not exceed the permissible exposure level (PEL).

(2) Strict PELs used by the Air Force consist of the following:

(a) For frequencies between 10MHz and 300MHz, inclusive, continuous worker exposure should not exceed an average power density of 10mW/sq cm. However, you can be exposed to a higher level if, in any 6-minute period, the product of multiplying the power density by your exposure time does not exceed 3600 mW-sec/sq. cm.

(b) For frequencies between 10KHz, workers should not be exposed continuously to more than 50mW/sq cm. However, you can be exposed to a higher level if, in 6-minute period, the product of multiplying the power density by your exposure time does not exceed 18,000 mW sec/sq. cm.

(3) As long as the RF radiation does not exceed the respective PELs in any given 6-minute period, your exposure can continue for an indefinite period. It is permissible to allow any worker exposure that satisfies one of the two criteria given above.

(4) If there is any question regarding these exposures, ask your supervisor or call Bioenvironmental Engineering Services.

III. HOW TO PROTECT YOURSELF AND OTHERS:

a. Make sure you have a copy of AFOSH Std 48-9 in your shop.

b. Whenever possible, use engineering controls provided in your job. These usually consist of dummy loads or calibrated devices into which the RF beam of the emitter can be directed when performing maintenance and calibration.

c. Know the radiation hazard area for each RF emitter you work on or around. These are usually described in your equipment technical orders or manuals. These documents also list the hazard distances for personnel, fuel and explosives.

d. Keep workers, fuel sources, and explosives out of their respective hazard distances. Use ropes, signs, and lights, if necessary, to keep these areas free.

(1) AF Form 737, Warning – RF Radiation Hazard; and AF Form 747, RF Radiation Hazard Warning sign, are official warning signs.

(2) RF warning signs are required at any and all locations where access to RF energy is in excess of that allowed.

e. Minimize your time spent in any hazard area. If you must go into the area know how long you can stay there and not exceed the PELs listed in paragraph II.d(2). Remember these things:

(1) If the emitter is rotating, you are exposed only during the time the emitter is actually sweeping you.

(2) The hazard area boundaries listed in your T.O.s, represent the points at which the power densities equal the PELs. The closer you get to the source, the higher the radiation intensity becomes and the less time you can spend in the hazard area.

(3) Call your supervisor or Bioenvironmental Engineering Services if you have questions regarding safe operating areas and exposure times.

IV. IF YOU SUSPECT AN OVER-EXPOSURE, THE SUPERVISOR SHOULD:

a. Shut off power to the unit.

b. Not change operating parameters on the equipment.

c. Contact Bioenvironmental Engineering Services.

d. Contact wing safety and unit safety offices.

e. Have the individual report to the Base Medical Squadron emergency room for a medical evaluation.

V. WHAT ABOUT FEMALES AND PREGNANCY?

a. All people who routinely work in areas where they may be potentially exposed to levels of RF radiation in excess of the PELs should be made aware of the hazards. They need to observe posted hazard warning signs and cautions described in the applicable equipment technical orders.

b. There is no evidence in the scientific literature to suggest that either males or females (pregnant or not) exposed to RF radiation below current PELs should be placed in a special monitoring or counseling program. Your occupational exposures to RF radiation are normally well below current PELs.

VI. If you need assistance or further information concerning RF radiation, please contact Bioenvironmental Engineering or Public Health.

MORE FAQs

"It's Radiation, isn't it?" All Radio Frequency (RF) radiation is nonionizing. This means that the photon energy is insufficient to dislodge orbital electrons an produce ions, as is the case with X-Ray and Gamma radiation. Biologically, ionizing and nonionizing radiation are worlds apart.

"So, what can it do to me?" Well, at sufficient high levels RF energy will cause heating in the body tissues. The amount of RF energy which is absorbed and converted to molecular energy is strongly frequency dependent (the resonant frequency of an adult is 7-80 MHz). But, whatever the frequency, an RF radiation induced thermal burden adds to other thermal burdens and produces normal physiological adjustments such as sweating and vasodilatation. If the tissue heating overloads the body's ability to dissipate it, exposed tissues will be heated and possibly damaged.

"What is a safe level of RF exposure?" AFOSH STD 48-9 establishes the maximum Permissible Exposure Limits (PELs) for human exposure to RF radiation. The PELs are expressed as the power density (in milliwatts per square centimeters) to which individuals may be continuously exposed.

FREQUENCY (MHz)	PEL (mW/cm)
.01-3	100
3-30	900/f *
30-100	1
100-1000	f/100 *
1000-300000	10

* f is the operating frequency of the emitter in megahertz.

Please note, the letter of the law is the PEL, the spirit of the law is ALARA (As Low As Reasonably Achievable).

"Is there any protective equipment available?" RF shielded clothing is not acceptable as a method of protection. No personnel alarms or dosimeters are currently available. The only realistic protective measures are surveys to determine the hazards area and posting of RF warning signs to alert all personnel. If very high levels of RF radiation are potentially accessible, positive controls such as flashing lights, audible signals, fences and interlocks may be required.

"What about all these other biological effects we read about?" The fact is, we just don't know all there is to know about the effects of RF radiation on the human organism. Currently, the scientific communities are deeply involved in research into the effects of chronic low-level RF exposures. To date, in the 5000 plus citations in the biomedical literature, the great majority of reported biological effects are thermal in origin or they represent a physiologic adjustment to an imposed heat load. So, before you go ordering your microwave sickness powder from China, come talk with your Bioenvironmental Engineering people at building (extension 884-1822).

RADIOFREQUENCY (RF) RADIATION OVEREXPOSURE ACTION

1. Individual (s) exposed will immediately tell his/her supervisor.

2. Supervisor will have individual report to the hospital Emergency Room if an acute injury is evident (see Note 1). If asymptomatic, an appointment to see the Flight Surgeon within 72 hours is required.

3. Supervisor will notify the Unit Radiation Safety Officer (RSO) of the situation.

4. Unit RSO will promptly contact the Bioenvironmental Engineer (see Note 2) and:

   a. Gather Name, Rank, and SSAN of all individuals involved.

   b. Note RF emitter settings at time of exposure (frequency, power, beam configuration and sweep).

   c. Obtain signed narrative statements from individuals and witnesses.

5. Bioenvironmental Engineering Services (BES), will perform an investigation to include reconstruction of the incident and make RF radiation measurements to determine exposure levels. The results of this investigation will be used to determine subsequent medical care actions to personnel exposed.

NOTE 1: Most RF overexposures will manifest little or no evidence of altered physiologic functions or symptoms of distress.

References:

Air Force Occupational and Environment Safety, Fire Protection, and Health Program (AFOSH) Standard 48-8, Exposure to Hazardous Materials

AFOSH Std 48-9, Radio Frequency Radiation (RFR) Safety Program

AFOSH Std 48-19, Hazardous Noises

AFI 90-901, Operational Risk Management

AFPAM 90-902, Operational Risk Management (ORM) Guidelines And Tools

AFOSH Std 91-12, Machinery

AFOSH Std 91-20, Vehicle Maintenance Shops

AFOSH Std 91-22, Walking Surfaces, Guarding Floor And Wall Openings and Holes, Fixed Industrial Stairs, and Portable and Fixed Ladders

AFOSH Std 91-31, Personal Protective Equipment

AFOSH Std 91-45, Hazardous Energy Control And Mishap Prevention Signs And Tags

AFOSH Std 91-46, Materials Handling And Storage Equipment

AFOSH Std 91-50, Communications Cable, Antenna and Communications-Electronic (C-E) Systems

AFOSH Std 91-56, Fire Protection and Prevention

AFOSH Std 91-66, General Industrial Operations

AFI 91-202, The US Air Force Mishap Prevention Program

AFI 91-204, Safety Investigations And Reports

AFI 91-207, The US Air Force Traffic Safety Program

AFI 91-301, Air Force Occupational And Environmental Safety, Fire Protection, and Health (AFOSH) Program

AFOSH Std 161-21, Hazard Communication